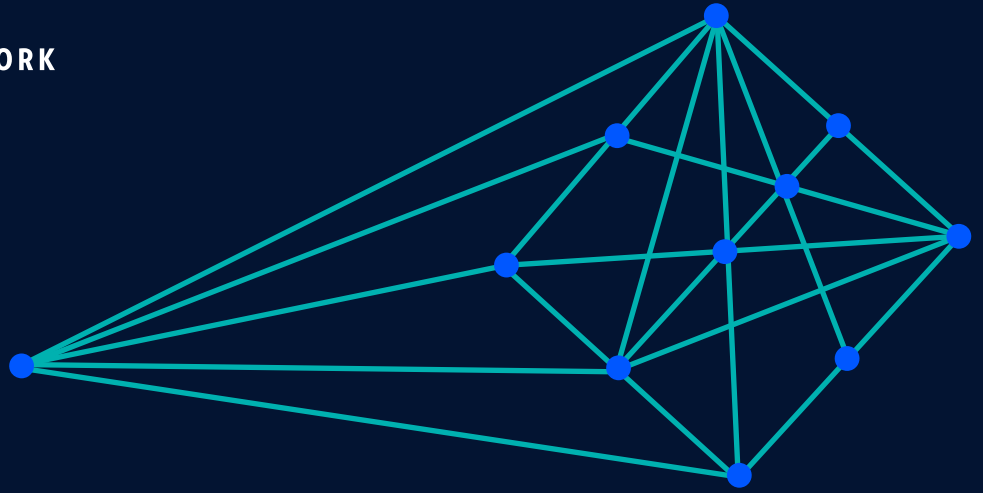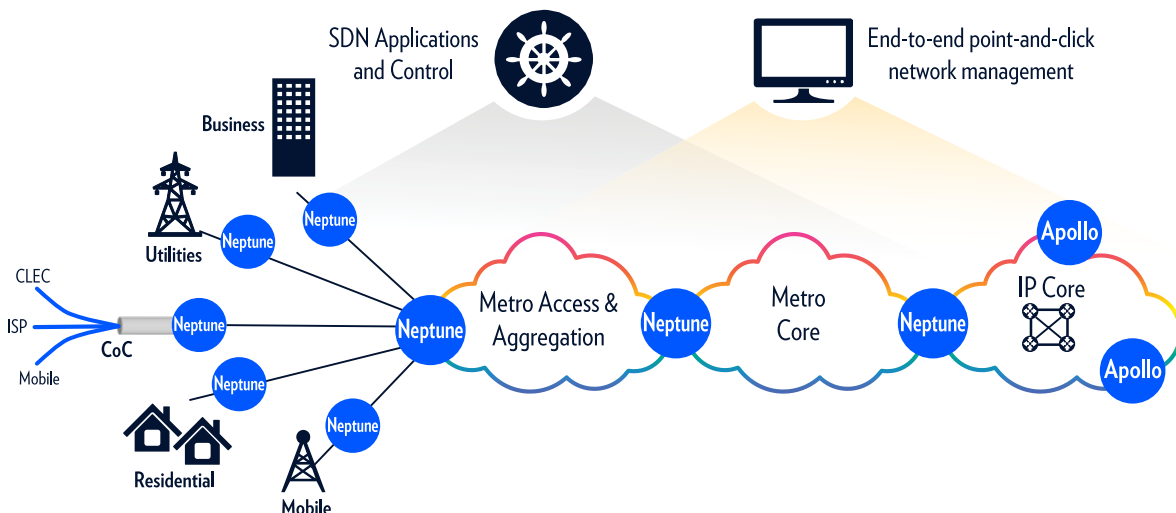# NEPTUNE NPT-1800
L1 TO L3 METRO CORE TRANSPORT

NPT-1800 is a high-capacity MPLS - based (IP and TP) multiservice packet transport platform and is part of ECI's Neptune (NPT) product line. Only 8RU in height and supporting up to 2 Tbps capacity (100 Gbps per slot), it is optimized for high-capacity metro-core nodes. The Neptune product line streamlines end-to-end metro service delivery by combining carrier-grade service assurance, visibility, and control with packet efficiency and unparalleled L1 to L3 multiservice support. Neptune offers a powerful, flexible, and efficient E2E metro solution for high-performance L1 to L3 services through convergence of IP, Elastic MPLS (IP and TP), Ethernet (MEF CE2.0 certified), OTN, WDM, and TDM. NFV services and SDN applications, which are compulsory in today's challenging metro environment, are also supported.

With such a rich, robust feature set, NPT-1800 is well-suited for a wide variety of applications and networking scenarios. These include mobile backhaul, wholesale services, residential multi-play and business VPN connectivity services. As with all ECI's transport products, NPT-1800 is managed by the unified multilayer LightSOFT® NMS.

Unmatched multiservice
from L1 to L3

Carrier-grade
service assurance

Elastic MPLS
both IP and TP

High capacity and compact
Metro core

Technical specifications

Packet	**Switch:** 1Tbps / 2Tbps **Services:** MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN and VPN based Ethernet and IP, MPLS (TP and IP) **Max. Interfaces (1 Tbps configuration):** 119 x 100/1000 FX, 71 x 10GE OTN, 6 x 100GE OTN
TDM	**Services:** CES (SAToP , CESoP and CEP) **Max. Interfaces:** 736 x E1/T1, 92 x STM-1/OC-3, 23 x STM-4/OC-12
WDM	CWDM, DWDM, Muxponder , Amplifiers
Timing and synchronization	SyncE with ESMC, 1588v2, External timing 1PPS and TOD, Internal Stratum 3E clock (holdover state), Primary and secondary sources (supports SSM bits), ACR, DCR, loop timing on SAToP, TDM bits (T3/T4), and SNTP
Protection and restoration	HW redundancy for common units, IO Hardware protection (IOP), RSTP/MSTP, G.8032 Ethernet Ring Protection (ERP), MPLS-TP FRR, Dual FRR, 1:1 Linear protection, PW Redundancy (PWR), Virtual Router Redundancy Protocol (VRRP), Multi Segment-PW, IEEE 802.3ad Ethernet Link Aggregation(LAG) with LACP, Multi Chassis LAG (MC-LAG)
OAM	Ethernet OAM (IEEE 802.1ag and ITU-T Y.1731 PM), IP/MPLS OAM (LSP Ping, LSP Trace-route), MPLS-TP OAM (G8113.2)(CC/AIS/RDI/LB/LT/DM), Bidirectional Forwarding Detection (BFD), RFC 2544 Generator, Y.1564 -Ethernet service activation (SLA), RFC 5357 Two-Way Active Measurement Protocol (TWAMP)
Traffic management	Traffic Classification (based on Port, VLAN, Port+VLAN, IEEE 802.1p, IPv4/IPv6 TOS and DSCP), Diffserv based TM, Network wide Call Admission Control (CAC), 8 Classes of Service (CoS)
Topologies	Mesh, Dual homing , multi-ring, ring, star, linear
Security	RADIUS (client authentication), SSH 2 , SSA SW integrity checking (SHA-2), SFTP, Access Control List (ACL), IEEE802.1x, control channel HMAC-256, Public key authentication, Port blocked as default
Management	LightSOFT® NMS, EMS-NPT, SNMPv2/v3, LCT, Muse™, CLI, OpenFlow, NETCONF/YANG
Power over Ethernet (PoE+)	Up to 30W
Pluggable SFP/CSFP/SFP+ /CFP/ CFP2 support	Electrical, Colored C/DWDM, Tunable, non-colored, Compact SFP (CSFP), SFP+ ,CFP2, CFP and bidirectional SFPs/SFP+
Power input	-40 VDC to -75 VDC
Power dissipation	Typical: 1200W
Operating temperature range	-5°C to +55°C (23°F to 131°F)
Operating RH range	5% to 95%
Environmental standards	NEBS –GR-63 Core, GR-1089 Core, ETS 300 019-1-3 Class 3.2, EN55022 Radiation Emissions (class A), IEEE 1613 (electric utility substations), IEC 61850-3 (electric utility substations), EN 61000-6-5 (Immunity for substations)
Safety	ETS 300 019-1-1 Class 1.2
EMC	EN 60950/2000, according to LVD Directive 72/23/EEC, EN 60825-1 and 2, EN 300 386-2, 1TR9
Physical dimensions	H x W x D: 13.8" x 17.5" x 9.6" / 352 x 445 x 243 mm

EXPANSION UNIT

OTN	**Services:** Ethernet, Storage, Video, SDH/SONET **Max. Service interfaces:** 48 x 1GE, 3 x 10GE, 24/12/8/3/3 x FC-1/2/4/8/10, 9 x (SDI, HD-SDI, DVB-ASI), 30 x (STM-1/4/16, OC-3/12/48), 3 x STM-64/OC-192, 24 x OTU-1, 3 x OTU-2 **Max. Transport interfaces:** 24 x OTU-1, 3 x OTU-2, 3 x OTU-2e
Physical dimensions	H x W x D: 3.5" x 17.4" x 9.6" / 88 x 443 x 243 mm

Specifications subject to change without notice

Contact us to find out how our ELASTIC networks can help your business grow

ABOUT ECI

ECI is a global provider of ELASTIC network solutions to CSPs, utilities as well as data center operators. Along with its long-standing, industry-proven packet-optical transport, ECI offers a variety of SDN/NFV applications, end-to-end network management, a comprehensive cyber security solution, and a range of professional services. ECI's ELASTIC solutions ensure open, future-proof, and secure communications. With ECI, customers have the luxury of choosing a network that can be tailor-made to their needs today – while being flexible enough to evolve with the changing needs of tomorrow. For more information, visit us at **www.ecitele.com**